

*Amendment and Reply*

U.S. Serial No. 09/467,076

Attorney Reference: 015837-0275781

Page 2

IN THE CLAIMS:

Kindly cancel Claim 35 without prejudice.

Please enter the following amended claims:

1. (Amended) A method of producing embryonic stem-like cells, wherein said cells comprise a nucleus derived from an adult differentiated cell and mitochondria from an oocyte of a species other than said adult differentiated cell, comprising the following steps:

- B<sup>2</sup>
- (i) inserting a donor differentiated human or mammalian cell or cell nucleus into a recipient animal oocyte, wherein such oocyte is derived from a different animal species than the human or mammalian cell under conditions suitable for the formation of a nuclear transfer (NT) unit, wherein the endogenous oocyte nucleus is removed or inactivated before, concurrent, or after introduction of donor cell or nucleus;
  - (ii) activating the resultant nuclear transfer unit;
  - (iii) additionally inserting into said oocyte cytoplasm derived from an oocyte or blastomere of the same species as the donor cell or nucleus;
  - (iv) culturing said activated nuclear transfer unit until greater than the 2-cell developmental stage;
  - (v) disassociating said activated nuclear transfer unit; and
  - (vi) isolating cells from said disassociated nuclear transfer unit to obtain embryonic stem-like cells.

2. (Amended) The method of claim 1, which further includes introducing the mitochondrial DNA of the same species as the donor cell or nucleus into the recipient oocyte.

B<sup>3</sup>

27. (Amended) Human embryonic stem-like cells obtained according to the method of Claim 1.

*Amendment and Reply*

U.S. Serial No. 09/467,076

Attorney Reference: 015837-0275781

Page 3

28. (Amended) Human embryonic stem-like cells obtained according to the method of Claim 11.

29. (Amended) Human embryonic stem-like cells obtained according to the method of Claim 12.

B<sup>3</sup> 30. (Amended) Human embryonic stem-like cells obtained according to the method of Claim 13.

31. (Amended) Human embryonic stem-like cells obtained according to the method of Claim 14.

32. (Amended) Human embryonic stem-like cells obtained according to the method of Claim 15.

B<sup>4</sup> 36. (Amended) The method of Claim 1, further comprising a step whereby a desired gene is inserted, removed or modified in said embryonic stem-like cells.

B<sup>5</sup> 50. (Amended) A mammalian somatic cell that expresses a DNA that encodes a detectable marker, the expression of which is operably linked to the expression of a particular cyclin.

*See the attached Appendix for the changes made to effect the above claim(s).*

Please add the following new claim(s):

B<sup>6</sup> --55. (New) The method of claim 1, wherein said cells isolated from said disassociated nuclear transfer unit are isolated from cells originating from the inner-most portion of said nuclear transfer unit.

56. (New) An embryonic stem-like cell isolated from the inner-most portion of a nuclear transfer unit according to the method of claim 55.

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Attorney Reference: 015837-0275781

Page 4

57. (New) Differentiated human cells obtained by the method of Claim 36, wherein said differentiated cells contain and express and inserted gene.

B<sup>6</sup>  
58. (New) The differentiated human cells of Claim 33, which are selected from the group consisting of neural cells, hematopoietic cells, pancreatic cells, muscle cells, cartilage cells, urinary cells, liver cells, spleen cells, reproductive cells, skin cells, intestinal cells, and stomach cells.--

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